



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/743,549

12/22/2003

John F. Butler JR.

00-0396

5795

8840 7590 04/19/2007

INTELLECTUAL PROPERTY
ALCOA TECHNICAL CENTER, BUILDING C
100 TECHNICAL DRIVE
ALCOA CENTER, PA 15069-0001

EXAMINER

MORILLO, JANEL COMBS

ART UNIT

PAPER NUMBER

1742

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
--	-----------	---------------

3 MONTHS

04/19/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/743,549

Applicant(s)

BUTLER ET AL.

Examiner

Janelle Combs-Morillo

Art Unit

1742

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 November 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-60 is/are pending in the application.
- 4a) Of the above claim(s) 39-60 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-38 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

1. The duplicate restriction requirement mailed November 28, 2006 is vacated.
2. Applicant's election with traverse of group I claims 1-38 in the reply filed on 11/13/2006 is acknowledged. The traversal is on the ground(s) that powder metallurgy is far removed from forming a metal sheet of group I. Even so, the restriction is maintained as the product claims of group I can still be made by a method materially different than the method of group II, for instance, by strip casting with fast quenching.

The requirement is still deemed proper and is therefore made FINAL.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-24, 26, 27, 29-38 are rejected under 35 U.S.C. 102(a) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over JP'2002-356730 A (JP'730).

Art Unit: 1742

JP'730 teaches a Al-Mg-Si alloy with 0.5-1.5% Si, 0.2-1.0% Mg, $\leq 0.3\%$ Mn (abstract), $\leq 0.3\%$ Fe [0022], $\leq 0.1\%$ Cu [0021], which completely encompasses or substantially overlaps the presently claimed Mg, Si, Mn, Cu, Fe (cl. 1-17). Concerning the limitation of "slow quenched", which applicant defines in [0022] of the printed publication as quenching at a rate of "less than about 200 °F/second", JP'730 teaches at [0028] a quench hardening rate of ≥ 5 °C/second or ≥ 10 °C/second [0028] achieves a Al-Mg-Si sheet product with good moldability/bendability, paint bake hardenability, and improved yield strength [0031]. Therefore, because JP'730 teaches a substantially identical Al-Mg-Si alloy processed by a method including slow quenching, it is held that JP'730 anticipates the presently claimed invention. Alternatively, it is held that JP'730 has created a prima facie case of obviousness of the presently claimed invention.

With regard to the process steps (cl. 1, 31-38), it is well settled that a product-by-process claim defines a product, and that when the prior art discloses a product substantially the same as that being claimed, differing only in the manner by which it is made, the burden falls to applicant to show that any process steps associated therewith result in a product materially different from that disclosed in the prior art. See MPEP 2113, *In re Brown* (173 USPQ 685) and *In re Fessman* (180 USPQ 524) *In re Thorpe*, 777 F.2d 695, 698, 227 USPQ 964, 966 (Fed. Cir. 1985). Once the examiner provides a rationale tending to show that the claimed product appears to be the same or similar to that of the prior art, although produced by a different process, the burden shifts to applicant to come forward with evidence establishing an unobvious difference between the claimed product and the prior art product. *In re Marosi*, 710 F.2d 798, 802, 218 USPQ 289, 292.

Art Unit: 1742

Concerning property claims 18-24, 26, 27, JP'730 teaches a BH yield strength of up to 229 MPa [Table 5], which overlaps or is a close approximation of the presently claimed YS minimums. JP'730 does not mention the critical fracture strain. However, because JP'730 teaches a substantially overlapping Al-Mg-Si alloy processed by slow quenching, then substantially the same properties, such as critical fracture strain, are expected to result.

Concerning claims 29-30, JP'730 teaches a sheet thickness of 1mm (Ex. 1) and is used for automobile body sheet [0007].

5. Claims 1-38 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over JP2001-294965A (JP'965).

JP'965 teaches a Al-Mg-Si alloy with 0.4-0.8% Si, 0.4-0.8% Mg, $\leq 0.3\%$ Mn, $\leq 0.3\%$ Fe balance aluminum (abstract) which completely encompasses or substantially overlaps the presently claimed Mg, Si, Mn, Cu, Fe (cl. 1-17). Additionally, JP'965 teaches examples within the instant claimed ranges (Table 1). Concerning the limitation of "slow quenched" (cl. 1, 31-38), which applicant defines in [0022] of the printed publication as quenching at a rate of "less than about 200 °F/second", though JP'965 does not specify the quenching rate of the instant alloy, it is well settled that a product-by-process claim defines a product, and that when the prior art discloses a product substantially the same as that being claimed, differing only in the manner by which it is made, the burden falls to applicant to show that any process steps associated therewith result in a product materially different from that disclosed in the prior art. See MPEP 2113. Therefore, because JP'965 teaches a substantially identical Al-Mg-Si alloy, it is held that JP'965 anticipates the presently claimed invention. Alternatively, it is held that JP'965 has created a prima facie case of obviousness of the presently claimed invention.

Art Unit: 1742

Concerning property claims 18-24, 26, 27, JP'965 teaches a yield strength ≥ 230 MPa (claim 3) as well as examples with YS up to 290 MPa (Table 3), which falls within the presently claimed YS minimums. JP'965 does not mention the critical fracture strain. However, because JP'965 teaches a substantially overlapping Al-Mg-Si alloy with a high YS, then substantially the same properties, such as critical fracture strain, are expected to result.

Concerning claims 29-30, JP'965 teaches a sheet thickness of 2.5mm [0028] and is used for automobile body sheet [0016].

Conclusion

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Janelle Combs-Morillo whose telephone number is (571) 272-1240. The examiner can normally be reached on 8:30 am- 6:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy King can be reached on (571) 272-1244. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 1742

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JCM

April 13, 2007

RECEIVED
APR 13 2007
11